

CLASS 11

BIOLOGY

NCERT SOLUTIONS

NCERT Solutions for Class 11 Biology Chapter 19: Chemical Coordination and Integration – Free PDF Download

Chapter 19 of Class 11 Biology is Chemical Coordination and Integration, the final chapter of the syllabus. It covers the human endocrine system, hormones, and their regulatory mechanisms. These Class 11 Biology Chapter 19 solutions are also useful as quick revision notes before exams.

Contents

- Endocrine Glands and Hormones
- Major Endocrine Glands
- Mechanism of Hormone Action
- Feedback Regulation
- Hormonal Disorders
- Class 11 Biology Chapter 19 – Notes and Extra Questions

Chapter 19 of Class 11 Biology is Chemical Coordination and Integration, the final chapter of the syllabus. It covers the human endocrine system, hormones, and their regulatory mechanisms. These Class 11 Biology Chapter 19 solutions are also useful as quick revision notes before exams.

Endocrine Glands and Hormones

Endocrine glands are ductless glands that secrete **hormones** directly into the bloodstream. Hormones are chemical messengers that act on distant **target cells/organs** possessing specific receptors.

Major Endocrine Glands

Hypothalamus: controls the pituitary (“master gland”). **Pituitary**: secretes growth hormone (GH), and hormones controlling other glands. **Thyroid**: secretes thyroxine (T₃, T₄, regulates metabolic rate) and calcitonin. **Parathyroid**: parathyroid hormone (PTH, regulates blood Ca²⁺). **Adrenal**: cortex (cortisol, aldosterone) and medulla (adrenaline/epinephrine — “fight or flight”). **Pancreas**: insulin (lowers blood glucose) and glucagon (raises blood glucose). **Gonads**: testes (testosterone), ovaries (estrogen, progesterone).

Mechanism of Hormone Action

Hormones bind specific receptors on/in target cells: **peptide hormones** (like insulin) typically bind cell-surface receptors, triggering intracellular second messenger cascades (e.g. cAMP). **Steroid hormones** (like cortisol, estrogen) are lipophilic and can cross the cell membrane, binding intracellular/nuclear receptors, directly influencing gene expression.

Feedback Regulation

Hormone secretion is tightly regulated, most commonly by **negative feedback**: rising hormone/product levels inhibit further secretion (e.g. thyroxine feeds back to suppress pituitary TSH release), maintaining homeostasis.

Hormonal Disorders

Diabetes mellitus (insulin deficiency/resistance, high blood glucose), **goitre** (enlarged thyroid, often from iodine deficiency), **dwarfism/gigantism** (growth hormone deficiency/excess).

Class 11 Biology Chapter 19 – Notes and Extra Questions

Along with these NCERT Solutions, students can also use the [Class 11 Biology Chapter 19 Extra Questions](#) and [Class 11 Biology Chapter 19 Revision Notes](#) for quick revision and extra practice.

See also: [Chapter 1](#) | [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Chapter 5](#) | [Chapter 6](#) | [Chapter 7](#) | [Chapter 8](#) | [Chapter 9](#) | [Chapter 10](#) | [Chapter 11](#) | [Chapter 12](#) | [Chapter 13](#) | [Chapter 14](#) | [Chapter 15](#) | [Chapter 16](#) | [Chapter 17](#) | [Chapter 18](#)

Practice more: [Chapter 1](#) | [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Chapter 5](#) | [Chapter 6](#) | [Chapter 7](#) | [Chapter 8](#) | [Chapter 9](#) | [Chapter 10](#) | [Chapter 11](#) | [Chapter 12](#) | [Chapter 13](#) | [Chapter 14](#) | [Chapter 15](#) | [Chapter 16](#) | [Chapter 17](#) | [Chapter 18](#)

Quick revision: [Chapter 1](#) | [Chapter 2](#) | [Chapter 3](#) | [Chapter 4](#) | [Chapter 5](#) | [Chapter 6](#) | [Chapter 7](#) | [Chapter 8](#) | [Chapter 9](#) | [Chapter 10](#) | [Chapter 11](#) | [Chapter 12](#) | [Chapter 13](#) | [Chapter 14](#) | [Chapter 15](#) | [Chapter 16](#) | [Chapter 17](#) | [Chapter 18](#)

© NCERTBooks.org — your one-stop source for Class 1 to 12 NCERT Books, Solutions, Extra Questions, Revision Notes, Formulas Handbooks and more. Visit ncertbooks.org for the latest chapters as they are published.